COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Blue Ridge Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Celanese Acetate, LLC
3250 Virginia Avenue, Narrows, Virginia
Permit No. BRRO-20304

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Celanese Acetate, LLC has applied for a Title V Operating Permit for its Narrows facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: January 27, 2012
Paul R. Jenkins
540-562-6822

Air Permit Manager: _____ Date: January 27, 2012
David J. Brown

Regional Director: _____ Date: January 27, 2012
Robert J. Weld

FACILITY INFORMATION

Permittee
Celanese Acetate, LLC
3250 Virginia Avenue
Narrows, VA 24124

Facility
Celanese Acetate, LLC
3250 Virginia Avenue
Narrows, VA 24124

County-Plant Identification Number: 51- 071-0004

This permit action is a significant modification as defined in 9 VAC 5-80-230. The source submitted an application on October 7, 2011 requesting that the State Operating Permit (SOP) that was issued on August 15, 2011 be incorporated into their Title V operating permit.

SIGNIFICANT MODIFICATION INFORMATION

On August 15, 2011, a SOP was issued to provide for the installation of a Finishing Line #1, Stripping Still #2 and Main Still No. 2l, the conversion of a monthly production limit to an annual limit, and limitations for non-modified equipment throughout the facility to verify the production limitations, and therefore the potential to emit of those units, is federally enforceable. This Title V significant modification incorporates those changes, which is necessary to allow the facility to operate in accordance with the SOP and also incorporates the February 22, 2005 minor NSR permit. This significant modification to the Title V permit does not require the submittal of a CAM plan since the units affected are not Large Pollutant-Specific Emissions Units and the permit is not being reopened for cause (40 CFR Part 64.5 Deadlines for Submittal).

SOURCE DESCRIPTION

NAICS 325211 – Plastics Materials and Resin Manufacturing
NAICS 325221 – Cellulosic Organic Fiber Manufacturing
NAICS 325199 – Industrial Organic Chemicals, Not Elsewhere Classified
NAICS 332813 – Electroplating, Plating, Polishing, Anodizing, and Coloring

The facility primarily manufactures cellulose acetate (CA) flake and fiber (NAICS 325211 & 325221). Acetic acid is recovered during CA production and a portion is converted to acetic anhydride for internal process use (NAICS 325199). Extrusion jets are also produced on-site to support the extrusion process associated with CA manufacturing. The extrusion jet manufacturing process includes electroplating operations (NAICS 332813).

CA is produced using acetic acid and cellulose (wood pulp) as raw materials. Wood pulp is (1) shredded

in attrition mills, (2) pretreated with acetic acid and then (3) mixed in acetylizer reactors with crystallized A-mix (a solution of acetic acid and acetic anhydride). The reactor effluent is neutralized with magnesium acetate and heated in the ripeners to produce acid dope. The acid dope is precipitated, hardened, washed and dried to produce CA flake. The extrusion complex dissolves the CA flake in acetone to produce dope, which is extruded through jets to produce CA filament for further processing. The facility is a Title V major source of PM_{10}, CO, SO_2, NO_x, VOC and HAPs. This source is located in an attainment area for all pollutants, and is a PSD major source. The facility is currently permitted under a minor NSR permit issued February 11, 2005 and a State Operating Permit issued August 15, 2011.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility is in compliance with their permit limits and requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility are listed in the table in Section II of the permit.

EMISSIONS INVENTORY

Emissions are summarized in the following tables.

2010 Actual Emissions

	Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO_2	PM_{10}	NO_x
Total	664.7	26.9	2.8	13.3	73.4

2010 Facility Hazardous Air Pollutant Emissions

Pollutant	2010 Hazardous Air Pollutant Emission in Tons/Yr
Methylene Chloride	13.5

EMISSION UNIT APPLICABLE REQUIREMENTS

Department 6 –Acetate

Particulate emissions from the Magnesium Oxide Silos (1D6SL001S1 & 1D6SL002S1) are controlled by bin vent filters and the Magnesium Acetate Mixing equipment (1D6MO001S1) is uncontrolled. Units are in this area are not modified in this significant modification.

Limitations: Allowable particulate emissions from the silos are limited to 0.02 gr/dscf and VOC emissions from the mixing equipment is limited to 12.4 lbs/batch and 9.7 tons/year. Department 6 is not allowed to produce magnesium acetate for off-site shipment. The VOC emission limits were calculated using the equations in the Pharma MACT (40 CFR 63.1257(d)(2)) and a maximum flake production of 3,576.0 units per year.

Monitoring: The source is required to do the following in order to properly operate and maintain the bin vent filters controlling emissions from the silos and process equipment that affect such emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. Considering the use of the Pharma MACT to calculate emissions, the monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the annual use of magnesium oxide, annual VOC emission from the Magnesium Acetate Mixing equipment (1D6MO001S1) and records of scheduled and unscheduled maintenance, operator training, and results of the inspections.

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The Department and EPA have authority to require testing if necessary to determine compliance with an emission limit or standard.

Department 8 – Acid Dope Manufacturing

VOC emissions from the Equalization Tank; Vats 19, 20, B-2, B-3, B-4, B-5; Magnesium Acetate Head Tanks (5), Pretreatment Mix Storage Vats (4), Pretreat Mix Head Tanks (2), No. 4 Condensate Vat, A-Mix Holding Tanks (10), Crystallizers (26), Ripeners (52), Acetylizers (26), Scrubber Acid Vat and the Department 6 Magnesium Acetate Sludge Vat 5 are controlled by the D8 Acid Vent Scrubbers (1D8SC001S1 & 1D8SC001S2). The VOC emissions from the Pretreaters (26) are controlled by the Department 8 Pulp Acid Scrubber (1D8SC002S1). Units in this area are not modified in this significant modification.

Limitations: Allowable VOC emissions from the Department 8 Acid Vent Scrubbers (1D8SC001S1 & 1D8SC001S2) are limited to 8.0 lbs/hr and 35.0 tons/year. The scrubber is required to achieve 99% control efficiency. This control device and these limits were confirmed by stack testing on April 19, 2005. The April 19, 2005 stack test showed the VOC emissions to be 4.63 lbs/hr (compared to the 8.0

lbs/hr permit limit) with 99.66 % control efficiency. The annual limits are calculated using the maximum flake production of 3,576.0 units per year.

Allowable emissions from the Department 8 Pulp Acid Scrubber (1D8SC002S1) are limited to 11.3 lbs/hr and 49.6 tons/year. The emissions were tested on July 27, 2004 and were determined to be in compliance. The July 27, 2004 stack test showed the VOC emissions to be 6.71 lbs/hr (compared to the 11.3 lbs/hr permit limit) with a capture efficiency of 89.2%. The annual limit is calculated using the maximum flake production of 3,576.0 units per year.

Department 8 is not allowed to produce acid dope for off-site shipment.

Monitoring: The source is required to equip both scrubbers with devices to continuously measure the liquid flow and differential pressure through each scrubber. The monitoring devices on the Department 8 Acid Vent Scrubbers (1D8SC001S1 & 1D8SC001S2) that measure the flow and differential pressure must be either recorded in a log or be electronically recorded at least once per hour. The monitoring devices on the Department 8 Pulp Acid Scrubber (1D8SC002S1) that measure the flow and differential pressure must be either recorded in a log or be electronically recorded at least once per day.

The source is required to do the following in order to properly operate and maintain the scrubbers and process equipment that affect emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. Considering the margin of compliance, the maintenance, training, and monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the annual production of acid dope, annual VOC emission from the Department 8 Acid Vent Scrubbers and Pulp Acid Scrubber, operation and control device monitoring records and records of scheduled and unscheduled maintenance, operator training, and results of the inspections.

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Department 9 – Cellulose Acetate Manufacturing

Particulate emissions from Flake Bins 1-64 and 65-96 are controlled by fabric filters (1D1FB001S1 & 1D1FB002S1), the Flake Screws and Fluidizers are controlled by fabric filters (1D1BH001S1 & 1D1BH002S1) and Flake Silos 1-5 are controlled by fabric filters (2PRSL001C1, 2PRSL002C1, 2PRSL003C1, 2PRSL003C2, 2PRSL004C1 & 2PRSL005C1).

Particulate and VOC emissions from Flake Dryers 1-8 are controlled by wet scrubbers (1D9DR001C1, 1D9DR002C1, 1D9DR003C1, 1D9DR004C1, 1D9DR005C1, 1D9DR006C1, 1D9DR007C1 &

1D9DR008C1) and the VOC emissions from the Flake Finishing Lines 1-8 are controlled by the Department 9 Acid Vent Scrubber (1D9SC001S1). Finishing line 1 was a modified emission unit, all other units in this area are not modified in this significant modification.

Limitations: Allowable limits from the fabric filters controlling emissions from the Flake Bins is limited to 0.02 gr/dscf for PM and PM_{10}, 1.6 tons/yr for PM and 1.3 tons/yr for PM_{10}. The limits are based on a grain loading of 0.02 gr/dscf and a maximum flake production of 3,576.0 units per year.

Allowable limits from the two fabric filters controlling emissions from the Flake Screws is limited to 0.02 gr/dscf for PM and PM_{10}, 0.9 tons/yr for PM and 0.6 tons/yr for PM_{10}. The limits are based on a grain loading of 0.02 gr/dscf and a maximum flake production of 3,576.0 units per year.

Allowable emissions from the six fabric filters controlling emissions from the Flake Silos is limited to 0.02 gr/dscf (each) for PM and PM_{10}, 1.7 tons/yr PM for all six control devices and 1.2 tons/yr for PM_{10} for all six control devices. The limits are based on the 0.02 gr/dscf and a maximum flake production of 3,576.0 units per year.

Allowable emissions from Flake Dryers 1-8 are limited to 1.1 lbs/hr (each dryer) for PM and PM_{10} and 24.6 tons/yr for all six control devices for PM and PM_{10}; 0.1 lbs/hr (each dryer 1-6 & 8), 0.17 lbs/hr (Dryer 7) and 2.2 tons of VOC for all dryers. The visible emissions from each dryer shall not exceed 5 percent opacity as determined by EPA Method 9. The limits are based on AP-42 emission factors (Table 11.12-2) and a maximum flake production of 3,576.0 units per year.

Allowable emissions from the Department 9 Acid Vent Scrubber controlling emissions from Flake Lines 1-8 are limited to 1.8 lbs/hr and 8.0 tons/yr for VOC. These limits were confirmed by stack testing on February 17, 2004 and are based on a maximum flake production of 3,576.0 units per year. The stack tests results indicated 0.129 lbs/hr and 0.57 tons/yr for VOC (compared to 1.8 lbs/hr and 8.0 tons/yr permit limits).

The combined production of cellulose acetate flake from all eight finishing lines shall not exceed 3,576.0 units per year.

Monitoring: The fabric filters controlling particulate emissions from Flake Bins 1-64 and 65-96, Flake Screws and Flake Silos 1-5 are required to be equipped with devices to continuously measure the pressure drop across each fabric filter. Those monitoring devices are required to be observed with a frequency of not less than once per week that the fabric filters operate and the permittee shall either keep a log of the observations or record them electronically. Considering the high gr/dscf limit, the maintenance and training requirements discussed later in this section, this level of monitoring and the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

The scrubbers controlling particulate and VOC emissions from Flake Dryers 1-8 are required to be equipped with devices to continuously measure the liquid flow through each scrubber. These control devices are required to be observed with a frequency of not less than once per week that the scrubber operates and the permittee shall keep a log of the observations or record them electronically. The

combination of the VE requirement, maintenance, training the monitoring requirements and the recordkeeping requirements outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

The permit requires (Condition XI.B.1) that at least once per week an observation of the presence of visible emissions from each emissions unit with a visible emission limit listed in the permit. If visible emissions are observed the permittee shall: take timely corrective action such that the emissions unit resumes operation with no visible emissions, or perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the emissions unit do not exceed the opacity emissions limit.

The Department 9 Acid Vent Scrubber (1D9SC001S1) is required to be equipped with devices to continuously measure the liquid flow and differential pressure through the scrubber. These control devices are required to be observed with a frequency of not less than once per week that the scrubber operates and the permittee shall keep a log of the observations or record them electronically.

The source is required to do the following in order to properly operate and maintain the fabric filters, scrubbers, Department 9 Acid Vent Scrubber and process equipment that affect emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. Considering the margin of compliance, the maintenance, training, and monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the annual production of cellulose acetate flake from all eight finishing lines; annual particulate and PM_{10} emissions from the fabric filters controlling emissions from the Flake Bins 1-64, Flake Bins 65-96, Flake Screws and Flake Dryers 1-8; annual VOC emissions from Flake Dryers 1-8 and Department 9 Acid Vent Scrubber, operation and control device monitoring records, records of scheduled and unscheduled maintenance, operator training, and results of the inspections..

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Department 10 – Acid Recovery

VOC and CO emissions from Stripping Still #2 (1AMSS001S1) is controlled by incineration of the vent streams in the ketene furnaces. VOC emissions from the Acid Recovery Department (Extraction Towers (12), Vaporizers (11), Main Stills (7), Effluent Stills (5), IPOH Separator, IPOH Still, Solvent Separator Tank, Clearing Tanks (12), Effluent Feed Tanks (4), Main Feed Tanks (4), IPOH Reflux Tank, Measuring Tank, Solvent Feed Tanks (4), Sparge Tanks (4), Sparge Condensers (5), Sample Drain Tanks (4) and Pure Still (55 gallon drum)) is controlled by the Acid Recovery Scrubber System (1ARSC001C1,

1ARSC001C2, 1ARSC002C1, 1ARSC201C1, 1ARSC202C1, 1ARSC301C1 & 1ARSC302C1). VOC emissions from the Building 10 Vat Yard are uncontrolled. Stripping Still #2 and Main Still No. 10 were included in the list of equipment being modified, all other units in this area are not modified in this significant modification.

Limitations: Allowable limits from the Acid Recovery System are limited to 40.9 tons/year of VOC. This limit is based on the maximum uncontrolled emissions of 681.12 tons/year, an efficiency of 95% and a maximum flake production of 3,576.0 units per year. The efficiency of the system and the emissions were tested on November 28, 2006 and February 23, 2007. The collection efficiency was determined to be 98.9% and the VOC emissions were 1.2 lbs/hr or 5.3 tons/year (compared to the permit limits of 95% and 40.9 tons/year).

Allowable VOC emissions from the Building 10 Vat Yard are limited to 19.0 lbs/hour and 83.1 tons/year. These emission limits are based on a potential feed rate of 74.18 units of AR Feed/hour and a maximum flake production of 3,576.0 units per year. The Building 10 Vat Yard VOC emissions were tested on February 18, 2004 and the emissions were found to be 4.05 lbs/hr (compared to the permit limit of 19.0 lbs/hr).

Monitoring: The scrubbers that are part of the Acid Recovery Scrubber System controlling VOC emissions from the Acid Recovery Department are required to be equipped with devices to continuously measure the liquid flow and differential pressure through each scrubber. These control devices are required to be observed with a frequency of not less than once per day that the scrubbers operate and the permittee shall keep a log of the observations or record them electronically.

The source is required to do the following in order to properly operate and maintain the Acid Recovery Scrubber System and process equipment that affect emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. Considering the margin of compliance, the maintenance, training, and monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the annual plant feed to the main still and solvent use in the Acid Recovery Department, annual VOC emissions from the Acid Recovery Scrubber System and Building 10 Vat Yard Scrubber, operation and control device monitoring records, records of scheduled and unscheduled maintenance, operator training and results of the inspections.

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. Performance tests are required for VOC emissions from the Acid Recovery Scrubber System to determine compliance with the emission limits and control efficiency requirements contained in the permit. These tests must be performed no later than February 11, 2012.

Anhydride Manufacturing

VOC and CO emissions from the process vents in the acetic anhydride production process (includes Light Ends and Decomp gas) are required to be controlled by incineration in the ketene furnaces. The Brine System and Color Reactor are uncontrolled. Units in this area are not modified in this significant modification.

Limitations: Allowable emissions from each ketene furnace are limited to the following levels: PM 0.14 lbs/hr and 1.96 tons/year; PM_{10} 0.14 lbs/hr and 1.96 tons/year; Nitrogen Oxides 3.0 lbs/hr and 39.52 tons/year; CO 1.51 lbs/hr and 21.67 tons/year; and VOC 0.21 lbs/hr and 2.84 tons/year. The limits are based on AP-42 emission factors for burning natural gas and were tested on September 19, 1995 and were determined to be in compliance.

Visible emissions from the acetic anhydride process shall not exceed 5 percent opacity as determined by EPA Method 9.

The production of acetic anhydride is limited to 330 million pounds per year. The approved fuels for the ketene furnaces is limited to 516 million standard cubic feet per year of natural gas and the auxiliary fuel vented from the acetic anhydride manufacturing process.

Monitoring: The vent valves to the atmosphere on the light ends/process vent gas header and the decomposition gas header are required to be equipped with a flow indicator that provides a record of flow of the gases at these locations at least once per fifteen minute period.

The permit requires (Condition XI.B.1) that at least once per week an observation of the presence of visible emissions from each emissions unit with a visible emission limit listed in the permit. If visible emissions are observed the permittee shall: take timely corrective action such that the emissions unit resumes operation with no visible emissions, or perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the emissions unit do not exceed the opacity emissions limit.

The source is required to do the following in order to properly operate and maintain the Ketene Furnaces and process equipment that affect emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. Considering the margin of compliance, the maintenance, training, and monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the annual production of acetic anhydride, the annual consumption of natural gas in the ketene furnaces, records of the times when the light ends/process vent gas streams or the decomposition gas stream is diverted to the atmosphere from the respective vent headers, results of stack tests, visible emission evaluations, annual emission calculations, operation and control device monitoring records, records of scheduled and unscheduled maintenance, operator training and results of the inspections.

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Preparation/Solvent Recovery/Extrusion

PM and PM_{10} emissions from the transfer of cellulose acetate flake from the live-bottom truck hoppers to the Storage Silos are required to be vented through the fabric filters on the storage silos. PM and PM_{10} emissions from the transfer of cellulose acetate flake at the live-bottom truck unloading facility are required to be totally enclosed with emissions vented to fabric filters. PM and PM_{10} emissions from the Semco flake handling unit are required to be controlled by a fabric filter. PM and PM_{10} emissions from the Semiworks process are required to be controlled by fabric filter. PM and PM_{10} emissions from the Building 2 CA Flake Weigh Hopper Receiver (2PRVT001S1) are required to be controlled by a fabric filter. PM and PM_{10} emissions from the Building 2 WOFA Handling (2PRVT017S1) are required to be controlled by a fabric filter. PM emissions from the Flake Loadout facility are required to be controlled by a fabric filter (2PRVT019C1). Units in this area are not modified in this significant modification.

Limitations: Allowable **e**missions from the fabric filter controlling emissions from the Truck Unloading are limited to the following: PM 0.50 lbs/hr and 0.73 tons/year and PM_{10} 0.50 lbs/hr and 0.73 tons/year. The limits are based on 0.02 gr/dscf .

Allowable emissions from the fabric filter controlling emissions from the transfer of cellulose acetate flake from the live-bottom truck hoppers to the existing Storage silos are limited to the following: PM 1.0 lbs/hr and 1.50 tons/year and PM_{10} 1.0 lbs/hr and 1.50 tons/year. The limits are based on 0.02 gr/dscf .

Allowable emissions from the fabric filter controlling emissions from the Building 2 Weigh Bin are limited to the following: PM 0.85 lbs/hr and 3.7 tons/year.

Allowable emissions from the fabric filter controlling emissions from the Building 2 CA Flake WOFA Handling are limited to the following: PM_{10} 0.01 gr/dscf.

Allowable emissions from the fabric filters controlling emissions from the transfer of cellulose acetate flake into the weigh hopper serving Mixer 9, 10, 11 and 11a are limited to the following: PM 0.02 gr/dscf (each) and 2.33 tons/year (combined) and PM_{10} 0.02 gr/dscf (each) and 2.33 tons/year (combined). The limits are based on 0.02 gr/dscf.

Allowable emissions from the fabric filters controlling emissions from the alternate pneumatic conveyor lines are limited to the following: PM 0.358 lbs/hr.

Allowable emissions from the fabric filter controlling emissions from the Semco flake handling unit are limited to the following: PM 0.23 lbs/hr and 1.0 tons/year and PM_{10} 0.23 lbs/hr and 1.0 tons/year.

Allowable emissions from the fabric filter controlling emissions from the preparation Semiworks process

are limited to the following: PM 1.8 lbs/hr and 0.8 tons/year and PM_{10} 1.8 lb/hr and 8.0 tons/year.

Allowable emissions from the fabric filter controlling emissions from the Flake Loadout facility are limited to the following: PM 2.3 lbs/hr and 3.6 tons/year.

Visible emissions from each of the fabric filters controlling emissions from the cellulose acetate flake live-bottom truck unloading facility and the fabric filters collecting the emissions from the Storage Silos are limited to 5% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by EPA Method 9.

Visible emissions from each of the fabric filters controlling emissions from the Building 2 CA Flake Weigh Hopper Receiver and the Building 2 CA Flake WOFA Handling are limited to 5% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by EPA Method 9. A visible emissions evaluation was conducted on January 28, 2010 and the test indicated compliance with the permit limit (all readings were 0%) while operating at 82.4% of capacity.

Visible emissions from the fabric filter controlling emissions from the preparation Semiworks process is limited to 5% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by EPA Method 9.

Visible emissions from the fabric filter controlling emissions from the Flake Loadout facility are limited to 5% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by EPA Method 9. A visible emissions evaluation was conducted on June 30, 2005 and the test indicated compliance with the permit limit (all readings were 0%).

The annual throughput of cellulose acetate flake through the CA live-bottom truck unloading facility is limited to 29,120 tons/year. The annual throughput of the preparation Semiworks process is limited to 2,190 tons of cellulose acetate. The processing limit for the Building 2 CA Flake Weigh Hopper Receiver is limited to 1,191 units of flake per year. The throughput of cellulose acetate flake at the Flake Loadout facility is limited to 47,500 tons/year.

Monitoring: The fabric filters controlling PM and PM_{10} emissions from the Building 2 CA Flake Weigh Hopper Receiver, Building 2 WOFA Handling and Semi-works process are required to equipped with a device to continuously measure the differential pressure drop across the fabric filter. The fabric filter monitoring devices on the Building 2 fabric filters are required to be equipped with a system that notifies appropriate personnel when the normal operating range is exceeded. The permittee is required to keep a log of each notification and the corrective action taken.

At least once each week that the Semco unit is operating either the pressure drop is required to be checked and recorded or a visible emission evaluation using EPA Method 22 shall be conducted.

The fabric filter controlling PM and PM_{10} emissions from the Semi-works process unit is required to be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The pressure drop is required to be checked and recorded at least once each week that the unit is operating.

The permit requires (Condition XI.B.1) that at least once per week an observation of the presence of visible emissions from each emissions unit with a visible emission limit listed in the permit. If visible emissions are observed the permittee shall: take timely corrective action such that the emissions unit resumes operation with no visible emissions, or perform a visible emission evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the emissions unit do not exceed the opacity emissions limit.

The source is required to do the following in order to properly operate and maintain the fabric filters installed on the storage silos, live-bottom truck CA flake unloading facility, pneumatic conveyor system, Semco Flake Handling Unit, Preparation Semiworks process, Building 2 CA Flake Weigh Hopper, Building 2 WOFA Handling and process equipment that affect emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. Considering the historical absence of visible emissions during routing observations, margin of compliance, the maintenance, training, and monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the hours of operation of the Semco Flake Handling Unit, annual throughput of cellulose acetate flake through the live-bottom CA flake unloading facility and cellulose acetate through the preparation Semiworks process, annual processing of flake through the Building 2 CA Flake Weigh Hopper Receiver, annual emission calculations and supporting documentation for emissions, operation and control device monitoring records, records of scheduled and unscheduled maintenance, notifications, results of all stack tests, visible emission evaluations and performance evaluations, operator training and results of the inspections..

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Wastewater Treatment Plant

VOC emissions from the two Wastewater Treatment Plant (WTP) diversion tanks (WWTK004S1 and 3WWTK005S1) are required to be controlled by limiting the amount of diversion water and VOC concentration in the diversion water. Units in this area are not modified in this significant modification.

Limitations: Allowable VOC emissions from the operation of the two WTP diversion tanks (WWTK004S1 and 3WWTK005S1) are limited to 3.6 tons/year.

Allowable VOC emissions from the operation of the wastewater treatment plant are limited to 32.9 tons/year.

The annual throughput of diversion wastewater in the two WTP diversion tanks (WWTK004S1 and 3WWTK005S1) combined is limited to 73.6 million gallons.

The annual average concentration of VOC in the diversion wastewater entering the two WTP diversion tanks (WWTK004S1 and 3WWTK005S1) is limited to 0.981% by weight. The daily concentration of VOC by weight is required to be calculated using the daily flow and VOC concentration. The monthly average VOC concentration by weight is required to be calculated by averaging the daily concentration of VOC.

Monitoring: The inlet piping to the WTP diversion tanks (WWTK004S1 and 3WWTK005S1) is required to be equipped with a device that continuously measures the flow of diversion wastewater into the tanks. The flow of diversion wastewater is required to be recorded at least once per hour while diversion wastewater is entering the tanks.

The source is required to sample the VOC concentration of diversion wastewater. Samples are required to be taken each day that the diversion wastewater is fed into the diversion tanks.

The source is required to do the following in order to properly operate and maintain the air pollution control equipment and process equipment that affect emissions: develop a maintenance schedule and maintain records; develop a monthly inspection schedule, maintain an inventory of spare parts, have written operating procedures for the equipment and train operators in the proper operation of the equipment. The monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of the daily and annual throughput of diversion wastewater, results of all sampling and analysis of diversion wastewater, daily and annual calculations and all supporting documentation for the VOC content of diversion wastewater entering the two WTP diversion tanks (WWTK004S1 and 3WWTK005S1) and monthly and annual emission calculations, all supporting documentation for emissions from the operation of the wastewater treatment plant, operator training and results of the inspections..

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Jet Department

Limitations: Allowable chromium emissions from the plating bath are limited to 1.3×10^{-5} gr/dscf, applied at all times except during periods of malfunction. This limit is required by MACT N, controls are not required to comply with this limit. Units in this area are not modified in this significant modification.

Monitoring: The source is required to monitor and record once per shift the pressure drop, temperature, bath concentration, amperage, fan operation and general working condition of the equipment according to the Operation and Maintenance Plan.

The source is required to prepare an Operations and Maintenance Plan that includes the following: standardized checklist documenting operations and maintenance of equipment, procedures to be followed to ensure that malfunctions due to poor maintenance or preventable conditions do not occur, system for identifying malfunctions or equipment and monitoring devices and implementing corrective actions, and a requirement to revise the plan within 45 days of the failure of the plan to adequately address a malfunction. The monitoring outlined in this section in conjunction with the recordkeeping outlined in the next section are considered sufficient monitoring and recordkeeping to ensure compliance with the limits included in this permit.

Recordkeeping: The source is required to keep records of compliance monitoring, inspection reports and scheduled and non-scheduled maintenance for the chrome plating tank; for the rectifier and its amperage monitor; for the tank heating system and temperature controller; and for the chrome plating bath tank ventilation fan, its fume collections system, and it pressure monitor; copies of reports required by the permit, plating bath equipment operator training, operation and maintenance plan, records of the actions taken during a malfunction and results of the inspections.

Testing: Testing and monitoring ports are required upon request and testing must use the appropriate method(s) in accordance with procedures approved by the DEQ. The permit does not require source tests. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting: The source is required to submit semi-annual Ongoing Compliance Status Reports to the Blue Ridge Regional Office and the EPA, Region 3.

Streamlined Requirements

The following condition in the February 15, 2005 minor NSR permit have not been included for the reasons provided:

Condition 11 – Initial visible emission evaluations for the Loadout Facility have been satisfactorily completed.

Condition 12 – Initial notifications of the actual date on which construction of the cellulose acetate flake loadout operation commenced, the anticipated start-up date of the cellulose acetate flake loadout operation and the actual start-up date of the cellulose acetate flake loadout operation were satisfactorily submitted.

Condition 13 – The facility met the construction requirements contained in the permit, therefore, the permit invalidation condition is no longer necessary.

The following conditions in the August 15, 2011 State Operating Permit have not been included for the reasons provided:

Condition 101 - Initial visible emission evaluations for Building 2 have been satisfactorily completed.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-09".

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

J. Permit Modification

This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:
9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content

FUTURE APPLICABLE REQUIREMENTS

None

INAPPLICABLE REQUIREMENTS

40 CFR 61 Subpart FF – NESHAP for Benzene Waste Operations – Benzene is not used onsite.

40 CFR 60 Subpart NNN – Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations – 1/26/1996 memo from DEQ documents that NSPS does not apply to the Isopropanol still installed as the AR unit.

40 CFR 63 Subpart UUUU – National Emission Standards for Hazardous Air Pollutants for Cellulose Products Manufacturing – 8/1/2002 memo from T. Thompson of DEQ documents that this MACT does not apply to the facility.

40 CFR 61 Subpart J – National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene – Benzene is not used onsite.

There are no applicable GHG permitting requirements.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A.4 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and

malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units are listed in Section XII of the Title V permit.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The draft/proposed permit public notice was placed in the Virginian Leader from December 14, 2011 to January 17, 2012 .

The EPA comment period ended on January 26, 2012.

No comments were received.